Hiroshi INOUE*: **Taxonomic miscellany on hepatics (1)**

井上 浩*: 苔類の分類雑記 (1)

1. Type specimen of *Plagiochila wichurae* Steph.

Plagiochila wichurae Steph. (Spec. Hepat. **2**: 327. 1903) was described from "China" based on a specimen "Wichura 2754", and Bonner (1962) and Inoue (1966) followed Stephani's original citation of the type from China; Inoue (1966) reduced *P. wichurae* to a synonym of the Himalayan *P. microphylla* Steph. (Spec. Hepat. **2**: 330. 1903). However, Reimers (1931) already pointed out that the type specimen of *P. wichurae* "Wichura 2754" was actually collected in Ceylon instead of China (he said that "Das Original: Wichura n. 2754 stammt von Ceylon: "Pedrotallagalla, an Bäumen-11. II. 1862").

In my review of the Ceylonese *Plagiochilae* (Inoue, 1979), I overlooked this comment by Reimers, because (1) I already treated *P. wichurae* as a synonym of *P. microphylla* based on my study on the types of both species, and (2) I was not able to see any plants of *Plagiochila* from Ceylon referrable to *P. microphylla*.

The plants in the type specimen of *Plagiochila wichurae* (in G) are small, 1-1. 5 cm long; the leaves are very closely imbricate and ventrally strongly secund, with dorsally long decurrent, strongly revolute and recurved margins; the flat leaves are suborbicular and about 0.8 mm long and wide, with 4-10 small but stout teeth on ventral and apical margins; the ventral margins are not decurrent at the base; the leaf-cells are 15-20×20-25 μ at the middle portion and 20-25×48-60 μ at the basal portion where the cells are forming small basal vitta area; the paraphyllia on dorsal side of stem are completely lacking.

The above short observations on the type of *P. wichurae* clearly indicated the identity of this species with *P. microphylla* known from the Himalayas, as already discussed by Inoue (1966). Two Ceylonese species of *Plagiochila*, *P. aequalis* Mitt. and *P. microdonta* Mitt., are superficially similar to *P. microphylla*. However, in *P. aequalis* the leaves are toothed on dorsal and ventral margins throughout (but sometimes except for basal half of dorsal margin), the

---

* Division of Cryptogams, National Science Museum, Tokyo. 国立科学博物館植物研究部.

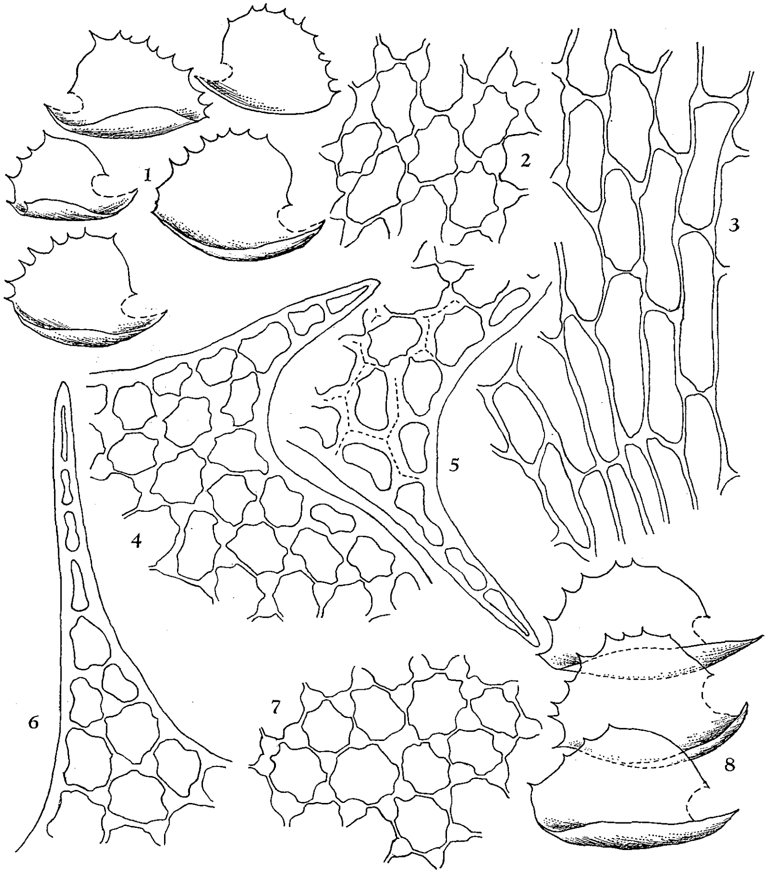

Fig. 1. *Plagiochila microphylla* Steph. 1, 8. Leaves, ×14. 2, 7. Median leaf-cells, ×270. 3. Basal leaf-cells, ×270. 4–6. Teeth from leaf-margin, ×270. Figs. 1–5 based on type of *P. wichurae*; others on type of *P. microphylla*.

paraphyllia are present on dorsal side of stem (but sometimes lacking in small plants), the teeth on leaf-margins are small, rather regular in size, being 1–2 cells wide at the base and 2–3 cells long (in *P. microphylla* they are usually 2–3 cells wide at the base and 3–6 cells long), and the leaf-cells are rather larger than those of *P. microphslla*, being 20–25×25–30 μ at the middle portion, with medium-sized trigones and moderately or distinctly thickened cell-walls. In *P. microdonta* the leaves are remote or approximate, never closely imbricate, usually widely exposing the dorsal stem-surface, and the basal leaf-cells are not forming the basal vitta area. Thus, *P. microphylla* is amply different from both *P. aequalis* and *P. microdonta.*

If the type specimen of *Plagiochila wichurae* was actually collected in Ceylon as remarked by Reimers (1931), *P. microphylla* Steph. should be included in the Ceylon flora and the Chinese record (Inoue 1966) should be rejected. However, I am not quite sure about the origin of the type of *P. wichurae*, and I have not studied any plant referrable to *P. microphylla* among the recent collections of *Plagiochila* from Ceylon.

2. New synonyms of *Mastigophora diclados* (Brid.) Nees ex Schiffn.

Mastigophora diclados (Brid.) Nees ex Schiffn., Conspect. Hepat. Archip. Indici: 202 (1898).

Synonyms: *Mastigophora africana* S. Arnell, Svensk Bot. Tidskr. **51**: 165 (1957), syn. nov.

Mastigophora africana S. Arnell var. *annobonensis* S. Arnell, Svensk Bot. Tidskr. **50**: 532 (1956), syn. nov.

Mastigophora diclados is a species of subtropical and tropical regions of Asia and the Pacific islands, extending the area to westward to islands around Africa (but not in the African continent). As indicated by Inoue (1971), this species is extremely polymorphic and has a long series of synonyms. *M. africana* and its var. *annoboensis* are only a form of *M. diclados* lacking paraphyllia on stem surface.

Specimens examined. Seychelles: Mahe, leg. A. Sörlin, s. n., type of *Mastigophora africana* (S). Annobon: Santa Mina, leg. K. Byström 65, type of *M. africana* var. *annobonensis* (UPS).

3. Notes on three species of *Pallavicinia* of Japan.

(1) **Pallavicinia subciliata** (Aust.) Steph., Spec. Hepat. **1**: 313 (1900).

Basionym: *Steetzia subciliata* Aust., Bull. Torrey Bot. Club. **6**: 303 (1879).

Synonym: *Pallavicinia longispina* Steph., Bull. Herb. Boiss. **5**: 102 (1897), syn. nov.

Pallavicinia spinosa [non (Gott.) Steph., 1900] Steph. in Inoue, Bot. Mag. Tokyo **8**: 293 (1894), nom. nud.

Symphyogyna tosana Steph. in Yoshinaga, Bot. Mag. Tokyo **20**: 54 (1906), nom. nud.

Specimens examined. Japan (Simoda): "U. S. N. Pac. Exped. under com. Rogers", ex hb Austin, as "*Steetzia* ——?" in MANCH (no. 22441), neotype of *Steetzia subciliata* designated by R. Grolle, 1970. Tosa: leg. Inoue s. n., type of *Pallavicinia longispina* (G).

Althoug on the label of the type specimen there is no indication of species name but only with a generic name, the plants are in coincidence with the description given by Austin (1879), and the neotype selection by Grolle (in herb.) was followed here.

The plants in the type specimen are small, only 1-1.5 cm long, with procumbent fronds which are bifurcate; teeth on thallus margin are all long ciliar, composing with 2-5 elongated cells and 1 cell wide at the base; gynoecial scales are typical form for "*P. longispina*". This species is rather common in Japan and Formosa; illustrations were given by Inoue (1976).

(2) **Pallavicinia ambigua** (Mitt.) Steph., Spec. Hepat. **1**: 312 (1900).

Basionym: *Steetzia ambigua* Mitt., Journ. Proc. Linn. Soc. London **5**: 123 (1861).

Synonyms: *Makedonothallus isoblastus* Herz., Journ. Hattori Bot. Lab. **14**: 31 (1955) = *Pallavicinia isoblasta* (Herz.) Schust. et Inoue in Inoue, Illustr. Jap. Hepat. **2**: 189 (1976), syn. nov.

Pallavicinia longispina Steph. var. *parvispina* Hatt., Journ. Hattori Bot. Lab. **5**: 90 (1951), nom. nud., syn. nov.

Pallavicinia longispina Steph. form. *parvispina* Hatt., Journ. Hattori Bot. Lab. **6**: 7 (1951), syn. nov.

Specimens examined. India: Khasia Mt., alt. 2-4000 ped., regio subtrop., leg. J. D. Hooker & T. Thomson 1637, lectotype (nov.) of *Steetzia ambigua* (BM). Formosa: Daiton, leg. G. H. Schwabe 22, type of *Makedonothallus isoblastus* (NICH). Japan: Obi, Miyazaki, leg. S. Hattori in Hepat. Japonicae ser. 1 no. 33, as *Pallavicinia longispina* St. (TNS); Isl. Yakushima, Kagoshima Pref., leg. S. Hattori 6902, type of *P. longispina* form. *parvispina* (NICH).

In the original description of *Steetzia ambigua*, Mitten (1861) cited two specimens, as Griffith s. n. (from Assam) and J. D. Hooker & T. Thomson 1637. The latter specimen agrees well with Mitten's description, but the former specimen apparently belongs to a form of *Pallavicinia lyellii* and does not coincide with *Steetzia ambigua*. The plants in type are rather small, about 1.5-2 cm long and 0.8–1.3 mm wide; the fronds are almost erect-arising from long creeping, rhizomatous stipes which are repeatedly branched (by the ventral intercalary type); the base of aerial fronds are gradually becoming wingless and the apex of thallus not attenuate (or very rarely slightly attenuate); the margins of thallus have long, apinose teeth which are composed of 3–5 uniseriate cells; the plants are all female and no androecia were observed.

The above short observation clearly indicates that *Steetzia ambigua* belongs to so-called "*Pallavicinia isoblasta*" which has hitherto been known from southwestern Japan to Formosa.

(3) **Pallavicinia lyellii** (Hook.) Gray, Nat. Arr. British Pl. 1: 777 (1821).

Basionym: *Jungermannia lyellii* Hook., Brit. Jungerm.: 77 (1816).

Synonym: *Pallavicinia grandicalycina* Steph., Spec. Hepat. 6: 63 (1917), syn. nov.

Specimen examined. Japan: Jimba, leg. Faurie in 1905, no. 1878, type of *Pallavicinia grandicalycina* (G-20981). Assam: leg. Griffith, s. n., det. as *Steetzia ambigua* by Mitten (1861) (BM).

Pallavicinia grandicalycina is one of the species long neglected since the original description. The plants in type specimen are rather small, well developed thallus being 3.5–4.5 mm wide and 0.8–1.5 cm long, densely procumbent on decaying wood (?); the thallus margin are almost entirely lacking any teeth but sometimens small, subhyaline, (1)-2-3-celled teeth developed on margin around the thallus apex. The specimen is consisted mostly of the female plants and I was able to study only three fragments of male thallus; the androecial scales are arranged in two rows along the lateral sides of costa of lower portion of thallus.

The above short observations clearly indicate that *Pallavicinia grandicalycina* apparently belongs to a phenotype of *P. lyellii* which, when grows in denes mats, are small, pale to bright green and the thallus becomes obdeltoid in shape with rather long wingless stipes.

I am very indebted to Dr. Riclef Grolle (Jena, Germany-DDR) for his generous suggestions, and to the directors and curators of Conservatoire et Jardin Botanique, Geneva (G), Swedish Museum of Natural History, Stockholm (S), The Herbarium, University of Uppsala, Uppsala (UPS), British Museum (Natural History), London (BM), and the Hattori Botanical Laboratory, Miya-

zaki (NICH) for their generous helps in sending me many important specimens on loan.

Literature Cited

Austin, C.F., 1879. Notes on hepaticology. Bull. Torrey Bot Club. **6**: 301-306. Bonner, C.E.B., 1962. Index Hepaticarum I. *Plagiochila* (Dum.) Dum. pp. 340. Weinheim. Inoue, H., 1966. Hepaticae. In A. Noguchi, A.: Bryophytes collected by Dr. K. Yoda in eastern Nepal. Bull. Nat. Sci. Mus. Tokyo **9**: 378-386. —— 1971. Memoir of the genus *Mastigophor* Nees. Bull. Nat. Sci. Mus. Tokyo **14**: 603-608. —— 1976. Illustrations of Japanese Hepaticae, 2. pp. 193. Tokyo. —— 1979. Contributions to the knowledge of the Plagiochilaceae of southeastern Asia, XVIII. Journ. Hattori Bot. Lab. **46**: 193-233. Mitten, W. 1861. Hepaticae Indiae Orientalis: an enumeration of the Hepaticae of the east Indies. Journ. Proc. Linn. Soc. London **5**: 89-128. Reimers, H. 1931. Beiträge zur Moosflora Chinas I. Hedwigia **71**: 1-77.

* * * *

1. *Plagiochila wichurae*のタイプはWichuraが1862年2月11日に“China”で採集したものとして記載されたが，Reimers (1931) はWichuraの日記などの証拠から，このタイプが実はセイロンで採集されたものであるとしている。タイプを詳しく調べてみると，この種はヒマラヤに多い*P. microphylla*と同一種であることが分ったが，セイロンにはこの種に当る植物はない。こんなことからReimersの見解にはにわかには同意することが出来ず，セイロンのフロラからは一応除外しておく。

2. オオサワラゴケ*Mastigophora diclados*は変異が多い種類で，ミクロネシア，ニューギニア，東南アジアから日本南部，インド南部，アフリカ近辺の島などに広い分布をもつ。今回アフリカ産の1種を新たに異名に列した。

3. 日本でクモノスゴケの学名として親しまれて来た*Pallavicinia longispina* Steph.には*P. subciliata* (Aust.) Steph.という古い有効名がある。また，最近日本産で確認されたクモノスゴケモドキ*Pallavicinia isoblasta* (Herz.) Schust. & InoueもインドのKhasia Mt.から記載された*P. ambigua* (Mitt.) Steph.と同じものであることが分った。日本から記載された*Pallavicinia grandicalycina* Steph.は原記載以来正体不明の疑問種とされていたが，タイプを調べたらヤハズゴケ*P. lyellii*の小形のものであることが判明した。なお日本産の*Pallavicinia*属には上記3種の他に*P. levieri* Schiffn.がある。